

What is claimed:

1. A method of transmitting instant messages to a mobile communication device via a wireless data  
5 communication network, comprising the steps of:

detecting presence information for a plurality of instant message sources at an instant  
messaging server that couples the instant message sources to the wireless data communication  
network;

detecting presence information of the mobile communication device at the instant  
10 messaging server; and

comparing the presence information of the mobile communication device with the presence  
information of the instant message sources and enabling at least one of the instant message sources  
to transmit an instant message to the mobile communication device.

15 2. The method of claim 1, wherein the plurality of instant message sources include mobile  
communication devices that are enabled to transmit instant messages directly to the mobile  
communication device via the wireless data communication network.

3. The method of claim 1, wherein the presence information of the instant message sources includes  
20 information regarding services provided by the instant message sources.

4. The method of claim 1, wherein the presence information of the mobile communication device  
includes location information, the method further comprising the step of:

enhancing the instant message transmitted from the at least one instant message source to  
25 the mobile communication device based upon the location information.

5. The method of claim 4, wherein the instant message is enhanced by altering the content of the instant message based upon the location information of the mobile communication device.

5 6. The method of claim 4, wherein the instant message is enhanced by altering the format of the instant message based upon the location information of the mobile communication device.

7. The method of claim 4, wherein the location information is provided by the wireless data communication network.

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8. The method of claim 7, wherein the wireless data communication provides the location information using triangulation techniques.

9. The method of claim 7, wherein the location information is provided by the mobile  
15 communication device.

10. The method of claim 9, wherein the mobile communication device includes a GPS receiver that tracks the geographic location of the mobile communication device, and wherein data from the GPS receiver is provided to the instant messaging server.

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11. The method of claim 1, wherein the presence information of the mobile communication device includes an activity state that describes a current activity of the user of the mobile communication device, and wherein the comparing step further comprises the step of matching the activity state of the mobile communication device with a service provided by the plurality of instant messaging

sources and selecting one or more of the instant messaging sources to transmit an instant message to the mobile communication device based on the matching step.

12. The method of claim 11, wherein the activity state is selected from the group consisting of a shopping state, a looking state or a visiting state.

13. The method of claim 12, further comprising the steps of:

the mobile communication device declaring a looking state and transmitting presence information including the looking state to the instant messaging server;

10 transmitting an interactive map to the mobile communication device;

selecting a location on the interactive map at the mobile communication device and transmitting location information to the instant messaging server; and

based on the location information, the instant messaging server enabling one or more of the instant messaging sources to transmit an instant message to the mobile communication device.

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14. The method of claim 1, wherein the presence information of the mobile communication device includes information indicating whether the mobile communication device is interested in receiving instant messages from the plurality of instant messaging sources.

20 15. The method of claim 1, wherein the presence information of the mobile communication device includes a contact proximity state for at least one other mobile communication device, the method further comprising the steps of:

detecting the location of both mobile communication devices; and

based upon the contact proximity state for the at least one other mobile communication device, transmitting an instant message to the at least one other mobile communication device indicating that it is within a certain proximity to the mobile communication device.

5     16. The method of claim 1, wherein the presence information of the mobile communication device includes a communication state indicating a bandwidth over which the mobile communication device can receive instant messages.

17. The method of claim 16, further comprising the step of:

10             selecting a type of instant message based upon the communication state of the mobile communication device.

18. The method of claim 17, wherein the type of instant message is a text type message if the communication state indicates a low bandwidth or is a video type message if the communication  
15     type indicates a high bandwidth.

19. The method of claim 1, further comprising the steps of:

              determining whether the mobile communication device can receive the instant message from the at least one instant messaging source; and

20             if the mobile communication device can not receive the instant message, then instead of transmitting the instant message to the mobile communication device, transmitting the instant message to an email inbox associated with the mobile communication device.

20. A wireless instant messaging apparatus comprising a presence information server coupled to a wireless network for communicating with a plurality of wireless devices operating on the wireless network, the presence information server comprising:

5 a device presence detector module for detecting the presence of at least one detected wireless device;

a presence storage module connected to the device presence detector module for storing presence information corresponding to the at least one detected wireless device, the presence information including extended state information; and

10 a device presence communication module connected to the presence storage module for transmitting the presence information to at least one interested device, wherein the extended state information enables an enhanced instant message to be transmitted between the at least one detected wireless device and the at least one interested device.

21. The wireless instant messaging apparatus of claim 20, wherein the instant messaging apparatus  
15 is further coupled to a wide area network for communicating with a plurality of hosts operating on the wide area network, each host providing one or more instant messaging services.

22. The wireless instant messaging apparatus of claim 21, wherein the presence information server further comprises:

20 a host presence communication module for transmitting the presence information to at least one interested host selected from the plurality of hosts.

23. The wireless instant messaging apparatus of claim 21, wherein the presence information server further comprises:

a host presence detector module for detecting the presence of at least one detected host of the plurality of hosts and connected to the presence storage module for storing the presence information corresponding to the at least one detected host.

- 5    24. A method of providing a plurality of instant messaging services to a mobile communication device via a wireless data communication network, comprising the steps of:

detecting presence information associated with a plurality of instant messaging hosts at an instant messaging server, wherein the presence information of the instant messaging hosts includes information regarding instant messaging services provided by the instant messaging hosts;

- 10        detecting presence information of the mobile communication device at the instant messaging server, wherein the presence information of the mobile communication device includes extended state information associated with the plurality of instant messaging services;

- 15        comparing the extended state information of the mobile communication device with the presence information of the instant messaging hosts and selecting at least one instant messaging service to transmit an instant message to the mobile communication device.

25. The method of claim 24, wherein the extended state information includes location information, the method further comprising the step of:

- 20        altering the content of the instant message transmitted by the instant messaging service based upon the location information of the mobile communication device.

26. The method of claim 24, wherein the extended state information includes an activity state that describes a current activity of the user of the mobile communication device, and wherein the comparing step further comprises the step of matching the activity state of the mobile communication device with a service provided by the plurality of instant messaging hosts and
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selecting one or more of the instant messaging services to transmit an instant message to the mobile communication device based on the matching step.

27. The method of claim 26, wherein the activity state is selected from the group consisting of a shopping state, a looking state or a visiting state.

28. The method of claim 27, further comprising the steps of:

the mobile communication device declaring a looking state and transmitting presence information including the looking state to the instant messaging server;

transmitting an interactive map to the mobile communication device;

selecting a location on the interactive map at the mobile communication device and transmitting location information to the instant messaging server; and

based on the location information, the instant messaging server enabling one or more of the instant messaging services to transmit an instant message to the mobile communication device.

29. The method of claim 24, wherein the presence information of the mobile communication device includes information indicating whether the mobile communication device is interested in receiving instant messages from the plurality of instant messaging services.

30. The method of claim 24, wherein the extended state information includes a contact proximity state for at least one other mobile communication device, the method further comprising the steps of:

detecting the location of both mobile communication devices; and

based upon the contact proximity state for the at least one other mobile communication device, transmitting an instant message to the at least one other mobile communication device indicating that it is within a certain proximity to the mobile communication device.

5 31. The method of claim 24, wherein the extended state information includes a communication state indicating a bandwidth over which the mobile communication device can receive instant messages.

32. The method of claim 31, further comprising the step of:

10 selecting a type of instant message based upon the communication state of the mobile communication device.

33. The method of claim 32, wherein the type of instant message is a text type message if the communication state indicates a low bandwidth or is a video type message if the communication type indicates a high bandwidth.

15 34. A mobile communication device for use with an instant messaging system comprising an instant messaging server and a plurality of instant messaging hosts, wherein the instant messaging server detects presence information associated with the instant messaging hosts, the presence information including information regarding instant messaging services provided by the instant messaging hosts,  
20 the mobile communication device comprising:

a transmitter for providing presence information of the mobile communication device to the instant messaging server, wherein the presence information of the mobile communication device includes extended state information associated with the plurality of instant messaging services; and



a receiver for receiving an instant message from one of the instant messaging services based upon a comparison of the extended state information of the mobile communication device with the presence information of the instant messaging hosts.